NOTES ON INORGANIC CHEMISTRY.

SEVERAL months ago M. and Mme. Curie separated from pitch blende a strongly radio-active substance for which they proposed the name *polonium*. In the *Comptes Rendus* for December 26th, in conjunction with M. Bémont, they describe another supposedly new element in pitch blende for which they propose the name *radium*, while the elementary character of polonium is confirmed. Polonium in its chemical nature seems to resemble bismuth, while radium is analytically indistinguishable from barium. Indeed, it would appear, especially as the spectrum of the new substance is apparently identical with that of barium, except one line, that in their samples radium is present only in small proportion and as an impurity in barium. The claim that it is a new element is based upon the radio-activity of the substance. Barium is not radio-active, while the substance obtained from pitch blende is extremely radio-active. By solution of the chlorid in water and precipitation with alcohol the substance may be fractioned until the chlorid is 200 times more active than uranium. In the spectrum of this substance Demarcy finds a line whose wave-length is 3814.8, and which is not due to any known substance. The further the chlorid is fractioned the stronger this line appears. An atomic weight determination showed a variation from that of barium only within the limits of experimental error.

IN the January number of the *American Chemical Journal* the work of E. C. Franklin and C. A. Kraus on liquid ammonia (already noticed in this JOURNAL) is continued. Since many inorganic salts are soluble in liquid ammonia, the probability of metathetic reactions, analogous to those in water, would be great. Such the authors find actually take place. Using the nitrates of sixteen metals, and the sulfid, chlorid, bromid, iodid, chromate and borate of ammonium as precipitant, it is found that those salts which are insoluble in ammonia are readily precipitated. The reactions with ammonium sulfid present the most interest, as the compounds formed differ in many cases at least from those formed in aqueous solution, as is evidenced by their color; for example, that with cobalt is pink, with nickel and with cadmium, white. The cobalt and the cadmium compound assume the normal color of the sulfid on adding water. These seem to be complex compounds, as the precipitate from magnesium nitrate with ammonium sulfid was examined and found to correspond best to the formula $2MgS, (NH_4)_2S, xNH_3$, where x is 9 or 10.

CONSIDERING in a second paper some of the properties in liquid ammonia the authors show its close relation to water. As a solvent for salts it is only surpassed by water; it closely approaches water in its power of dissociating electrolytes; indeed, some salts conduct electricity better in ammonia solution than in aqueous solution; in many compounds it plays the same part as water of crystallization; its specific heat is as great as that of water and its molecular elevation constant is lower than that of any other substance yet measured. As a solvent it differs from water in not dissolving the sulfates and sulfites, the alkaline carbonates, phosphates and oxalates, and hydroxids. In its solvent power for organic substances it comes nearer alcohol than water. The solid ammonia is not, like water, specifically lighter than the liquid, nor does it exhibit a maximum density above its melting point. Altogether, the investigations which Professor Franklin is carrying out on liquid ammonia promise to enrich our chemical knowledge in no small degree.

J. L. H.

CURRENT NOTES ON ANTHROPOLOGY.

BAD FORM IN ANTHROPOLOGICAL WRITINGS.

IN a note to one of his recent articles Dr. S. R. Steinmetz criticises, with just severity, two faults conspicuous in some writers on anthropology (though surely not peculiar to works in this branch). The one is the appropriation, without any or sufficient acknowledgment, of the work of others. This may arise from inadequate preparation, an ignorance of what others have written, or a half-knowledge of it, as well as from deliberate intent.

The second fault is constant self-repetition and self-reference. I can name a writer whose references to his own writings exceed those to